NBC NEWS - STS-1 LAUNCH (6:00 A.M E.T - 7:25 A.M E.T) (4-12-1981)

https://www.youtube.com/watch?v=MPO2r5wIl6U (https://www.youtube.com/watch?v=MPO2r5wIl6U)

Uploaded by DANNOTCH'S NEWSVIDEOS (https://www.youtube.com/channel/UC7X0LKts7k4FT498Id_x5sg) on Sun Jun 20 2021.

From Sunday, April 12th, 1981 NBC NEWS Live coverage of the first space Shuttle Launch with NBC NEWS John Chancellor, Tom Brokaw, Roy Neil, Jim Cummins, and Robert Bazell.

- Coverage runs from 6:00 A.M E.T - to 7:27 A.M E.T
  Launch was at 7:00:03 A.M E.T

  STS-1 CREW:
  Commander: John Young
  Polit: Bob Crippen

00:00:00 (https://www.youtube.com/watch?v=MPO2r5wIl6U)

[Music] uh live from the cave the kennedy space center at cape canaveral florida nbc news covers the flight of columbia the shuttle begins sponsored in part by ford and your ford dealer who invite you to test drive the exp america's new personal sports coupe here are nbc news correspondents john chancellor and tom brokaw well don't worry everybody here we are again if you saw the dress rehearsal uh welcome to the opening we actually think it will go today the countdown is proceeding they think it will go at seven o'clock in the morning and let me introduce my colleagues tom brokaw whom you all know and joseph kerwin dr kerwin is an astronaut and was a very valuable member of our coverage team here two days ago when the shuttle did not go and this morning we think it really will go they uh seven o'clock one hour from now they really are aiming for that every indication is that it will go perfectly this morning uh the weather is a slight problem it's a little bit dark out there incidentally it's dark in here largely because we have a filter on this window uh it is darker on your set in here than it is out there and you'll see out there in just a minute tom about the weather we want to talk about the weather there was a little bit of nervousness about it yesterday because yesterday morning they had cloud cover in this area if they'd had that much cloud cover this morning they would not have been able to go forward with the launch at this time from what we've been hearing from the weather it looks pretty good the winds are quiet down to about three knots they don't want crosswinds because if there is trouble on the launch the columbia would have to return to a long landing strip

00:02:00 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=120s)

long landing strip here at the kennedy space center and it comes in without power so they can't have any crosswind we have frank field standing by just outside our nbc booth here overlooking the launch pad and let's get an update from him now on what the weather situation is right well tom the weather's just about perfect the only problem with the weather has been that it's a little moist here until our weather map simply ran away but right out over the launch pad itself you can see the waters are perfectly calm we've got some high thin cirrus up at about 25 000 feet the flagpole is just sitting out there limp as you mentioned the wind is even less than three knots right here we have some lower broken clouds but that's just offshore right over the flight range ship which reported uh just uh some few scattered to broken clouds you see there the flagpole no wind to speak of so the weather here at cape kennedy is just at the kennedy space center is just about perfect and in the primary landing zone out at edwards air force base there too the weather is almost ideal with high thin scattered clouds winds at about eight to ten knots out of the southwest the visibility is perfect and all the contingency zones at the north rip strip the weather there too is just about perfect and all the other zones kadena hickam rhoda not as good but the primary zones for the most part are excellent so the weather is just cooperating gentlemen the astronauts have been up now for about three and a half hours and they have made their way to the spacecraft and they are buttoned up inside as of now and they've been checking out the communications facilities that they have and other things they had a slight problem earlier with some breathing apparatus that was quickly solved and we have a report now from ike siemens on how they spent these last three and a half hours astronauts young and crippen seem more relaxed at breakfast today than they did on friday krippen even waved and appeared to say hi joining them for steak and eggs were nasa officials and former astronaut harrison schmidt now a united states senator from new mexico meanwhile at the launch pad floodlights

[00:04:01 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=241s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=241s)

meanwhile at the launch pad floodlights made the space shuttle gleam in the early morning darkness as tiny bits of hydrogen and oxygen were pumped into the tanks to replace amounts being boiled away young and crippen were already into their pressure suits crippen stuffed his pockets with information he'll need during the flight john young tried on his space helmet for last minute adjustments doctors had attached instruments to the astronauts to measure their vital signs they're in good shape even at the height of the problems during the first launch attempt on friday both men had very low pulse rates when they left to board columbia well-wishers gave them a send-off [Music] then for the second time young and crippen climbed into columbia for their ride into orbit someone in the firing room radioed them and jokingly apologize for the stale sandwiches in the box lunches left over from friday's aborted flight throughout the final countdown this morning nasa spokesman hugh harris said again and again things are going smoothly everyone here hopes that continues ike siemens nbc news at the kennedy space center well john young ought to be familiar with stale sandwiches he was the astronaut of course who reportedly took along a corned beef sandwich on one of the gemini missions we'll be back with continuing coverage we're going to show you the clock now as the countdown continues there will be holes built in it doesn't mean that we're going to launch in 25 minutes they're going to have a 20-minute hold and then a 10-minute hold we'll have more from the kennedy space center and the launching of the columbia space shuttle after this we're disappointed that the launch didn't go off and many of them stuck around we get a report now on the crowd situation surrounding cape canaveral in the kennedy space center from nadine stewart well i'm sitting here playing and watching the cars go by

[00:06:02 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=362s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=362s)

i'm sitting and wondering [Music] it was the second time around but there was no feeling of anna climax around the cape this morning the shuttle had become a symbol everyone waiting for liftoff had a personal interest in seeing it go up well i'd like to be an astronaut but you know it takes a lot of courage and i'd be scared to go up there right now anybody can see it on tv but i got the chance to be here live so i really see it live there were traffic jams again lines that looked like new york rush hour at its worst a small city had sprung up again around the launch everyone had a sense of being part of history and everyone wanted to record the moment from his own vantage point many were seeing their first launch but mary bub has seen them all and she's made a special hat for every one of them especially this one well i started the beach days way back with a lot of friends of mine who were here tonight there's a lot of gathering of the clan this is way back in the late 50s when they were starting in missiles you know and i've seen over i've seen more launches than anybody else here and everyone is just as exciting but this means more to me than any other i think it was a carnival a show that will have one run only but it was more than that these people were here because they believe in the shuttle and they wanted to show it what does it mean to me a whole opening up of a new world i was here to see the space shuttle nadine stewart nbc news cape canaveral we're waiting now for the launch control to announce a 20-minute hold during that 20-minute hold they will adjust the countdown clock uh tom as you know and uh they will

[00:08:03 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=483s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=483s)

tom as you know and uh they will adjust the clock so that the uh spaceship columbia will take off just at seven o'clock eastern standard time we're just coming up to the announcement now let's listen to aircraft and also chase planes the the chase planes will not take off until later at the t-minus nine minute hold period uh with the final playing being launched at t minus five minutes with a very very tight uh constraint there coming up on the hold t-minus 20 minutes and holding so that's it this is a 20-minute hold and they will do a number of things readying the so-called chase planes we're at t-minus 20 minutes and holding and we'll have a number of things happen verification that the shuttle landing facility convoy preparations are ready and we also will have another weather briefing to ensure that everything is go but as it is now we know of no problems which would prevent a liftoff on time at 7 00 a.m this morning the t-minus 20 minutes and holding this is shuttle launch control yeah among other things during this 20-minute hole they'll be activating the computers that gave him so much trouble the other day we'll be talking about that in just a few moments with astronaut joe kerwin we have bob bazel standing by now down in the vip area there are a lot of people who came from washington and across the country to watch the launch on friday not all of them stuck around obviously or i guess that's the situation bob it seems that way it's much less crowded today even though nasa chartered a plane for the second time they chartered a plane bring down a bunch of people from washington at about a cost of the taxpayers of about a hundred thousand dollars i have with me here that uh a vip on the from the vip area who didn't come on on the plane it's steven spielberg the man who made the movie jaws and more important i guess for our purposes today the movie close encounters of the

[00:10:01 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=601s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=601s)

today the movie close encounters of the third kind uh science fiction movie about meeting people from other planets how does the reality here uh compare to your fantasies this is a reality which is much more expensive than my imagination this is this is uh the best kind of reality because it's going to uh get the space program uh back on uh both feet and right into the 21st century so it's uh it's really a rather remarkable day how do you feel about being here if you've seen it launched before a real never seen a launch before i've never seen i've i've seen a launch with small ships about seven inches uh but i've only seen special effect launches nothing like this no is there things you've seen here that's gonna maybe influence what you're doing the films in the future well i i think what's really influential here's the enthusiasm it it's really great to know that there are so many people who believe in uh getting off off earth for various scientific or even fantasy reasons and and it reinforces my belief in science fiction even more do you have some space reserved on the shuttle don't you have some space uh the next uh the next shuttle that carries the canisters i have a small canister that's right these are these packages that you can buy for what sixty thousand dollars or thirty thousand dollars no i think they range from between 20 and 30 thousand dollars yeah what are you going to put in this canister now that you have a chance to send something up in space you're putting me on the spot i i i have a few ideas but nothing uh nothing definite yet i i want it certainly to be so it has to be an experimental unit and it has to it has to uh uh evidence some good and i'm not quite sure what i have a few producers i'd like to put up but uh that's not permitted yet we have some i don't have some producer but i do thank you very much for being with us mr spielberg john they uh a little inflation there right there little and well yeah actually you can buy if you're interested uh a space on a little compartment on the shuttle for three thousand dollars and a number of people have been uh have bought them and some and i'm not sure about mr spielberg have been given those

[00:12:00 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=720s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=720s)

about mr spielberg have been given those spaces to uh use for various purposes and he hasn't decided what he's going to do with it the last word we've had from launch control is that the weather here which is the one variable we're now working with is satisfactory so we'll be back with more after this we're just listening to the launch control and we're told that the weather aircraft are up and uh weather is satisfactory things are going well when the uh space shuttle columbia lifts off the pad here and goes into uh its path toward orbit the control will switch to the johnson space center in houston texas and that will be the control for this flight during the 54 hours 54.5 hours of the flight roy neal is in houston now at the space center roy are you there yes indeed john we've been following avidly all those things that you and tom have been reporting from there at the cape and fascinated by the crowds and the things that have turned out here in houston it's still dark outside and the visitors haven't shown up yet they were here in droves yesterday and we expect they'll be back later today of course the visitors see all sorts of nice things but they don't see what we see which is in mission control and i'd like to show you some of those people right now with some special emphasis on a few of them this is the take in mission control showing guidance and navigation and they're typical of television the minute you come in for a close-up dick fits the guidance and navigation control officer gets up walks away this is the larger view showing them poised ready to leap as it were and there's a feeling here this morning a strong feeling that we are really going to go today and the we in this case means the nasa people these people who hope that within the next 45 minutes or so they will be controlling a flight from space throughout all of yesterday and the day before ever since the postponement there's been a great deal of study going on here and now they believe they have the computer problems resolved

[00:14:02 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=842s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=842s)

they have the computer problems resolved completely and so far this morning they're waiting for this point in that countdown tom to see what happens thank you roy uh we're going to talk about some of those pesky computers with uh joe kerwin joe kerwin ladies and gentlemen is now going to explain the computers stand by i'm a terrible artist but i tried and i think i understand this drawing and i'm going to try to make you understand it uh on the spacecraft we have a set of prime computers four of them and we have a fifth identical computer loaded with totally different software which is the backup computer now when you wake these computers up at some 30 hours before launch the first thing they do is go on and stretch and say i wonder what time it is and they check they send a signal to our master timing unit on board the spacecraft a highly accurate clock requesting its count time and it gives them a return signal saying what time it is right then and then they synchronize with the master timing unit now out here i've shown these numbers represent minor computer cycles which are 125th of a second apart okay and the timing unit is going to tell the prime computer that it's at timing uh it's at minor cycle one or two or three or so on up to 25. now it depends where in that minor cycle the timer is when the computer tries to synchronize to it if it's if it's near the beginning here it's fine it'll synchronize back to number one if it's near the end it'll jump ahead and synchronize to number two if it's right spaying in the middle there is a small statistical chance that it could synchronize back when it should have synchronized forward or the reverse and what will happen in that case is that the master timing unit is on one time cycle in the prime computer all all four of them are on another

[00:16:01 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=961s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=961s)

all all four of them are on another cycle 40 milliseconds different uh since they're all on the same one they're happy but the backup computer when it gets started also goes to the master timing unit and on the very likely assumption that it times up correctly it's now 40 milliseconds apart from the from the primes that's what happened yesterday that's what happened on on friday so what what the big deal is then if you can see the bottom of the chart i've exploded two of these minor cycles and showed you with the little blips that during each minor cycle certain data is taken in by the computer and fed from the primes across to the backups most of it's the same every minor cycle but every now and then you get one that's different and if that different one doesn't come on the cycle expected the backup computer says the prime computers are wrong and it drops them out and that's what happened and what they couldn't do as you were explaining to me earlier they couldn't shut them all down and start them up again because they had such an ex a volatile situation out on the pad and they control all the systems on the spacecraft and the trouble had developed while they were down they wouldn't have been able to find it out they were too late in the count yeah all right there it is i understand it and if i understand it anyone can't believe me at this point there'll be a quiz later i will have continuing coverage here from the kennedy space center cape canaveral there will not be a quiz believe me as we continue after this nbc's coverage of the first space shuttle will continue in a moment here at the kennedy space center we are in a planned hold for the launching of the columbia space shuttle and it is all proceeding smoothly there is a question of danger however in this fight those questions have been raised as a result of two factors one there have been a number of problems in the preparation for this launch and two there has been no unmanned testing of the launch of the columbia space shuttle so roy neal went to five of the key people at nasa and he asked him whether the critics were right when they said that nasa is

[00:18:00 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=1080s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=1080s)

were right when they said that nasa is exposing these astronauts to unnecessary risks by putting them up there before they even understand well i certainly don't agree we're taking any unnecessary risk i think the risks are being taken here are quite justifiable very much the same as you have test pilots fly an airplane for the first time in fact i think it really enhances the probability of overall success by having the people on board so no i don't think there's anything at all unjustified about what's being done here let me answer that roy by saying this i've been involved in the mann program for 21 years now and i've never felt as comfortable about a first man launch on any of the programs i've been involved with as i do on this one even in spite of the fact that the first launch is the man launch but this uh flight hardware is in really apple pie order i uh i tend to think of it as is the kind of shape that normally the third or fourth flight hardware's in it's really that good much better than previous first flight yes we are flying man the first time but i believe we've done more to get ready and taking more precautions than any other previous first flight and when you look at the fact of that risk and wait to a certain extent what man can do for you in that mission but it's the right decision to fly that first one man i think we've enhanced the entire program the most and we really have not uh unduly jeopardized the man in the first flight no i don't believe we're taking any risks i think that as far as we can tell and as every everything we know about i think we feel very comfortable with the spacecraft systems and the structure and the procedures that we're going to follow i think we understand how to fly the machine i think the people on the ground understand how to operate the machine with the crew in flight i think that if we knew anything else to do we would have done it and uh in the time we've had

[00:20:00 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=1200s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=1200s)

had certainly in the last year in preparing for this flight we feel very comfortable with flying the machine i guess the best answer that i can give you to that roy is that i certainly will not approve it if i don't feel that way and right now i feel that it is a safer flight uh as it is humanly possible to make it and it looks as though they are going to make it in about 33 minutes all going smoothly here we'll be back with more after this we are back if you just joined us here uh tom brokaw and i and joseph kerwin dr kerwin is an astronaut here covering the launch which we now believe will happen of the space shuttle here at the kennedy space center at cape canaveral everything is going according to schedule it's all on the computer problem that they had yesterday or day before was fixed uh the computers actually have been on and some of the things that would be going on in the countdown now have already been done we are at coming to the end now of a 20-minute planned hold in the countdown and in about 15 or 20 seconds the uh clock that you see on your screen will start to move again as we get close to the countdown liftoff is scheduled for just about 30 minutes from now exactly there will be one more minus 20 minutes a purge of the fuel cells which provide both electricity for the orbiter and drinking water for the crew is being performed at this point the computer is changed to a program known as major mode 101 which is the terminal countdown configuration at this point the primary computer is can compared with the proper onboard computer to ensure that they are ready for launch

[00:22:00 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=1320s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=1320s)

to ensure that they are ready for launch the nasa convoy conductor is verified that the landing convoy at the ksc shuttle landing facility is ready uh in case of a return to launch site abort the landing would be on runway 1-5 all of the other lawn sites also have confirmed that they are ready to go just prior to coming out of the hold we receive verification that the pre-flight alignment of the inertial measurement union unit had also been completed and so everything moving along smoothly the countdown at t minus 18 minutes 56 seconds and counting this is shuttle launch control and joe kerwin uh something should have happened there at about 19 they should have put on that backup computer they've had trouble twice before that's the point where they do it and we'll know whether they have any trouble again in just a moment yeah they've been a little bitter we're listening now to conversation turn on your own pvc active one and two power this is cdps we verify tracking all four strings that's good that's it thank you thank you because it worked okay great yeah that means the computers are working yeah that's right that's where he had trouble not only friday but in one earlier test as well at that very point when they brought on the uh backup period so the countdown can now continue there is another planned hole that you have to be aware of we're not going to launch in 17 minutes and 46 seconds they'll hold again for about 10 minutes and more people are watching around here as well john including a lot of people who worked on this product yes it's quite a day for them on the a number of the workers who helped assemble this whole enterprise here today are down

[00:24:02 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=1442s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=1442s)

whole enterprise here today are down here with their families to watch it go they came two days ago they're here this morning it looks as though they will see it go this morning and we've got a little report on those workers now you're looking at one positive result of friday's launch delay traffic control and crowd control here have improved dramatically following that dry run many of the same people we saw friday have returned once again to the bank of the banana river mostly space center worker workers and their families and more police are expecting bigger crowds today since it's a weekend they should have a spectacular view of the launch five miles from here especially spectacular because it will be different according to veteran launch watchers like charlie johnson who's with me here mr johnson why do you expect this launch or how do you expect this launch to be different from all the others you've seen before the giant saturn 5 was a single huge unit about 38 stories tall and when it went up it had a single great flame coming from the bottom this unit will have three different sets of flames striking the pad the pad will have about a foot thick wall of water on it that will condense immediately in the steam it may look as though the whole thing was blowing up at first but it will be steam coming up not smoke and the unit will soon rise above this and then you'll very clearly see i believe the three great jets of flame coming down it'll do a little twist as it goes up and that should be quite interesting to watch i don't think anybody knows exactly what to expect to see but it should be interesting such enthusiasm and also the the fact that no one knows exactly what to expect it would probably help explain why these tens of thousands of people have sat in traffic all night and slept on the ground out here to watch something that will last less than two minutes this is jim

[00:26:00 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=1560s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=1560s)

less than two minutes this is jim cummins with a big crowd of people five miles from the launch site thank you very much jim we just have been hearing from hugh harris here at the kennedy space center that they had a little cheer when the backup computer and the four primary computers began talking to each other and they were all in synchronization the computers are working that was the problem on friday it is not a problem this morning that does not mean that other problems could not develop but so far it does appear to be a very clear uh road right now to a launch at 7am eastern time this morning things are in good shape the astronauts are in the columbia shuttle and we'll continue with our coverage of the launch of the columbia shuttle right after this nbc's coverage of the first space shuttle will continue in a moment a center where all things are proceeding smoothly toward a 7 a.m eastern standard time launch of the columbia space shuttle and in place and on board are astronauts john young and robert griffin they have a combined total by the way of 31 years as astronauts they began their careers each of them as navy pilots and each has logged thousands of hours of flying time including some hours here in the past 48 hours between the delayed launch of friday and today's scheduled launch there is one big difference between the two of them of course krippen has not been in space before young a veteran has been up there four times before so even though crippen is only seven years younger than john young he's a kind of space rookie the kid on this flight and young is the wily old veteran that can lead to some funny moments between the two of them as heidi shulman found out when she prepared this profile of astronauts young encryption hey john after this flight are you going to give up and stop flying you're going to leave it for those younger folks space flight this old man at 50 john young is certainly not an old man yet the fact that he jokes about his age and its possible effect on his

[00:28:00 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=1680s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=1680s)

and its possible effect on his profession tells you something about him he doesn't seem to worry about matters he can't control someone once said of young that he's an amusing bundle of contradictions a man both witty and aloof a man who likes adventure but dislikes the outdoors he is totally dedicated but on the flight of gemini 3 young took a corned beef sandwich from his pocket and offered a bite to his startled commander the late virgil grissom gemini 3 in 1965 was young's first space flight since then he has been to the moon and back and in his 19 years as an astronaut he has left a profound personal mark on this country's space program in 1966 young commanded gemini 10 with michael collins that mission advanced the techniques of space flight by docking with an unmanned aegena rocket just about everyone remembers apollo 11 the flight that put neil armstrong and edwin aldrin on the moon apollo 10 with young thomas stafford and eugene cernan had been the final rehearsal on that flight the lunar module came within 9.5 miles of the moon's surface so near and yet so far young finally made it to the moon in april of 1972 the flight of apollo 16. riding his so-called moon buggy on the lunar surface young radioed back to the space center in houston we've just set a new world speed record 17 kilometers an hour on the moon he spent 20 hours exploring the moon's surface young and robert crippen have been training for their space shuttle flight for more than two years crippen is 43 he has been an astronaut since 1969. this will be his first space flight but during his 12 years in the program crippen has as the saying goes paid his dues he was part of the crew in a 56-day skylab medical experiments altitude test a simulation of future skylab missions later crippen was a member of the support team for three skylab flights plus the apollo soyuz mission in 1975.

[00:30:01 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=1801s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=1801s)

plus the apollo soyuz mission in 1975. their training for the space channel flight has involved 25 hours of formal instruction each week plus a total of more than 1200 hours working in elaborate mock-ups of columbia's flight deck crippen points out that some of the problems that have delayed the mission were a benefit in one sense they gave both men more time to plan and practice for just about any contingency for that unexpected moment when something might just go wrong or as young puts it if you're not nervous you don't understand what's happening heidi shulman nbc news you're looking at the uh the space shuttle and its solid fuel boosters and the big tank fuel with liquid uh oxygen and hydrogen and the clock is stopped the planned uh hold at nine minutes away from launch is in effect now it will last about 10 minutes conductor that they are let's listen to the launch control at the present time we know of no major problems as we enter this final 10-minute build in hold they will uh that an arm that you see there at the top can we just see the picture back again for a second please walter that arm and arm up there that's called the oxygen venting arm will be withdrawn uh during this hold and the rest of the connections that they have with the spacecraft itself will be withdrawn they will also start the countdown clock at this point a very precise clock because some of these operations in the launching of the space shuttle are done uh within seconds they they come in a sequence that is hundreds of seconds apart and the countdown clock is very important they're doing that now everything seems to be going very well tom yeah let's talk to joe a few moments about what we might expect once they begin the ignition and some of the critical points that will hit during the t-minus nine

[00:32:00 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=1920s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=1920s)

will hit during the t-minus nine countdown once the clock starts counting again we'll be getting in a new territory that we unfortunately didn't get to friday uh they've already got the nine-minute gopher launch and i'm sure that was a trip around the room both in the launch control center and at houston which is ready at five minutes they start the hydraulic power units uh that's a very critical point because uh uh they're fuel critical they're used to control the the engines and control services during launch and entry three and a half minutes the fuel cells take the full power load and at 25 seconds before launch the general purpose computers take over the launch and it's automatic we're looking at some venting right now in the external tank yeah that is going on yeah that tall tank in the middle of your picture there has more than half a million gallons of liquid hydrogen and oxygen in it and that's a little bit of the venting uh that occurs naturally that's not a difficulty that we're seeing there that's the natural venting of that it makes a little gas in the morning air the other thing i think that we ought to say joe tell our warn our viewers that we'll see ignition of the main rocket engines of the of the orbiter before we'll see the solid rocket boosters go off it's about a three second difference between three and a half maybe four seconds the clock goes forward before zero zero those engines have to be running and verified when the solids ignite they recycle the clock back about a half a second to zero and off you go okay once you light the solids you are gone we've got a minute to talk about the rain birds i think that's something else that's very interesting here well this this particular rocket ship spaceship is very close to the pad the others have been quite a distance away but this is right down there and so when all those engines go off it makes an enormous amount of noise so much noise in terms of decibels that it could shake that thing to pieces so what they are doing is they are damping that sound down with hundreds of thousands of gallons of water that are poured in there the water it has nothing to do

[00:34:01 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=2041s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=2041s)

in there the water it has nothing to do with the flames that you will see it has to do with the sound that's being made so that the sound of this spaceship doesn't tear the spaceship apart when it goes off and those that's called rain birds and you may hear them mentioning rain birds but that's what it's called it's an acoustic damping system so much power involved in all of this that a lot of people have liking it to the launching of a roman candle you fire those solid rocket boosters and off she goes we'll see a much faster ascent than what we've been used to in the space program yes we will quite a bit faster and as john said a lot of vibration in those first three seconds the if all the systems get through that all right they're going to go all the way the launch director is about to speak to the crew okay let's listen to that director is talking to his team about the launch commit criteria at the present time i guess we're not going to hear that all right we'll be back with uh continuing coverage of the launching of the columbia space shuttle from the kennedy space center right after this [Music] a message from the president is being read to the astronauts at this moment and we are also told from the white house that president reagan got up at 6 15 eastern time this morning to watch this shot good morning mr president uh we uh also have roy neal standing by in houston to talk about the mission roy are you there yes i am john and uh at the moment we're standing by here even as you you're going to hear something different in a few minutes too at liftoff uh you'll hear a voice change as launch control at the cape gives way to mission control here in houston hugh harris who's been doing the reporting job from there will be replaced by john mcleach here and neil hutchinson centered in this picture the fella in the blue shirt with the beard that's pushing buttons right now neil hutchinson the flight director and his team will assume control of the entire operation uh hutchinson here has been checking going round the horn is

[00:36:00 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=2160s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=2160s)

been checking going round the horn is the expression they use and they're getting green lights on all consoles meaning there's nothing to delay the launch as uh mission control in houston hears it and sees it they will actually assume control of the flight at the point where the spacecraft flies beyond the tower the tower is just a limiting factor it has nothing really to do with the tower being there it's just a point in space where that spacecraft is high enough that it's flying to all intents and purposes once in flight the flight director of course takes over and they keep going round and round now the tracking stations out across the atlantic will be reporting back and there's a critical tracking station that we will be listening for here that stations in madrid spain as the spacecraft on that tracking map that you see it on the big tracking map up at the top of your picture top left when the spacecraft flies out over arching over europe on the first orbits at that point the flight director will make the go no go for the crew uh as they uh are then given the go to at least stay in orbit for uh stay and stay in space for a few orbits all right i think that's the picture from houston up to this moment let's stand by with you at the cape okay roy thank you uh we feel we have about 45 seconds to go now until the nine-minute hold uh is is over and at that point let's talk just a moment about what you'll be hearing uh you will be hearing the voice of hugh harris who will start about 30 seconds from now and the computers will take over this launch at this point at nine minutes and the ground launch sequencer initialization will start and from then on it'll be in the hands of the computers and what you'll be hearing mainly will be the voice of launch control here at the kennedy space center hugh harris we won't do much talking unless we feel that he's getting too complicated so you'll hear the real words about this shuttle launch control at t minus nine minutes and holding we are approximately

[00:38:00 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=2280s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=2280s)

minutes and holding we are approximately 26 seconds away from picking up the countdown at the t-minus nine minute point nine minutes remaining between now and seven a.m when we expect to have a liftoff of america's first space shuttle uh the launch team has been briefed on the way in which a halt can be called to the countdown during the final nine minutes of the countdown and we're coming out we're at t minus nine minutes and counting the launch events are being controlled by the ground lawn sequencer now that has been initiated and that will be in control up to t minus 25 seconds when they switch to the onboard redundant set launch sequencer the ground launch sequencer is a part of the launch processing system and operates by relaying commands to the orbiter's onboard computers which then report back to the launch processing system that the commands have been executed the primary job of the computers is to check that all of the launch commit criteria such as propellant loads temperatures pressures and other measurements are satisfactory the primary chase aircraft have taken off a third t38 will take off at the t-minus five minute mark the timing of this plane uh is such a tight window that a 15-second delay would mean that they would not be in the proper position at launch the slate t-38 supersonic trainers have such critical timing because of the small fuel load that they carry t-minus seven minutes 52 seconds and counting the voice of hugh harris from launch control uh approximately 40 seconds away from movement of the orbiter access arm this is the final arm which must be moved out of the way to provide for the orbiter to clear the tower properly this may be a very

[00:40:00 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=2400s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=2400s)

a very interesting launch to watch from the standpoint that the orbiter is able to translate slightly horizontally as it begins to lift off and it also does a roll maneuver which will place it the orbiter sort of on its back as it goes towards the proper inclination to the equator t-minus seven minutes seven seconds and counting t minus seven minutes and counting and we have retraction of the orbiter access arm beginning to move back first away from the orbiter and then to swing away this was the walkway attached to the service structure and used by the crew to walk to the orbiter the crew has been advised to lower their helmet visors very slow movement by the orbiter access arm t-minus six minutes 29 seconds and counting the crew is beginning the apu pre-start this the start begins at the five minute point in the countdown t-minus six minutes 15 seconds and counting the apu's are turbine devices fueled by hydrazine which provides hydraulic power to change the angle of the engines and the flight surfaces on the orbiter t-minus 5 minutes 59 seconds and counting pilot bob crippen had begun that apu pre-start which uh started about 48 seconds from now the development flight instrumentation which measures the stresses on the orbiter during flight have been turned on and recorders uh store information for playback after landing t-minus five minutes 30 seconds mark and counting

[00:42:04 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=2524s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=2524s)

pilot bob crippen has signified the auxiliary power units are ready to be started t-minus 5 minutes 15 seconds and counting coming up on the five minute point four three two one mark t minus five minutes and counting we have had a goal for apu start apu start is in work this is a start sequence the final chase plane has taken off from patrick air force base t minus 4 minutes 42 seconds and counting t minus 4 minutes 30 seconds and counting once we get the apu start we have a total of 12 minutes of hydrazine supply for running the apu's prior to a lift-off everything going very smoothly in this count the apu start is complete t-minus four minutes ten seconds and counting as preparation for main engine ignition the main fuel valve heaters have been turned off t minus three minutes 57 seconds and counting the final helium purge on the shuttle main engine has been started in preparation for engine start the liquid oxygen replenish system has been turned off in preparation for pressurization of the tanks for the launch t-minus three minutes 35 seconds and counting the elevon speed brake and rudder are being moved through a pre-programmed

[00:44:00 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=2640s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=2640s)

being moved through a pre-programmed pattern to assure that they'll be ready for use in flight t-minus three minutes 20 seconds and counting the shuttle is now on internal power however the fuel cells are still receiving their fuels from the ground support system for one more additional minute coming up on t minus three minutes t minus three minutes and counting the engine gimbal or movement check is underway to assure they're ready for flight control t minus two minutes 52 seconds the lox valve on the external tank has been closed and pressurization has begun after the tank is pressurized the hold capability is limited to 3 minutes 36 seconds t minus two minutes forty seconds and counting the the fuel cell ground supply of oxygen and hydrogen has been terminated and the vehicle is using its onboard supply t minus two minutes twenty five seconds and counting t minus two minutes fifteen seconds the pressure in the lox tank is at flight pressure coming up on just two minutes away from launch t-minus two minutes mark and counting the liquid hydrogen vent valve has been closed and flight pressurization is underway t minus one minute fifty seconds and counting chuck cannon has just said smooth sailing baby to astronauts john young and bob crippen t-minus one minute 35 seconds and counting

[00:46:06 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=2766s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=2766s)

t minus 1 minute 20 seconds and counting we can see the purges of the main engines as we prepare for ignition t minus one minute ten seconds and counting liquid hydrogen tank is at flight pressure minus one minute mark and counting the firing system for the sound suppression water will be armed in just a couple seconds from now it has been armed t minus 45 seconds and counting t minus 40 seconds and counting the development flight instrumentation recorders are on t minus 35 seconds we're just a few seconds away from switching to the redundant sense sequencer t minus 27 seconds we've gone for redundance at sequencer start t minus 20 seconds and counting t minus 15 14 13 t minus 10 9 8 7 6 five four we've gone for main engine start we have main engine start from america's first space shuttle and the shuttle has cleared the tower

[00:48:01 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=2881s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=2881s)

[Music] 434 maximum roger [Applause] [Music] [Applause] [Music] columbia houston you're going throttle up [Applause] [Music] [Applause] [Music] [Applause] roger columbia on the nice ride you're lopping a little bit though you'll probably be slightly higher staging one minute 45 seconds coming up on go no go columbia your negative seats so that call up says uh that uh colombia is the altitude is too high for ejection seat use mark two minutes four seconds standing by for srb step confirmation there we go roger on the step columbia mark uh two minutes 20 seconds confirmed solid rocket booster set that means those two rockets on either side of the main fuel tank have separated from the spacecraft right on

[00:50:00 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3000s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3000s)

separated from the spacecraft right on schedule 30 seconds onboard guys converging this program colombia is now steering for its precise window in space for main engines it's about 30 miles up in the air now about 23 and the space shuttle is now traveling at about 3 500 miles an hour after a stunning launch three minutes young encrypt rayleigh moving out now velocity now reading 6200 feet per second everything going three minutes 15 seconds columbia now 51 nautical miles in altitude 66 nautical miles downrange velocity now reading 6500 feet per second it's being powered now by the liquid rocks columbia now 55 nautical miles in altitude 78 nautical miles downrange bringing that up at a very rapid rate because it's going to be through with that about another five minutes right three minutes 40 seconds standing by for a return status check in mission control by flight director neil hutchinson columbia governor greene to continue it uh for those of us three minutes 55 seconds standing by for a prestamiko which says colombia should lose one engine standby prestamiko continues flying forward coming up on negative returns it's a little early that indicates uh above normal engine performance they're getting all the boosting mark of four minutes eight well they're doing miko as a main engine cut off that's what they're talking about that's right that's right negative return okay negative return means they can mark up four minutes come back in about a second so something happened the next thing

[00:52:01 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3121s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3121s)

so something happened the next thing that we wrote in spain colombia now committed to space travel youngest griffin can no longer turn around and return to the launch site columbia houston we're showing both olms pc transducers off-scale high mark four minutes 45 seconds the uh flash evaporator is activated on board the cool column scale low here there's an enormous amount of heat generated there and they've got an evaporator system that has worked well that they were off scale low which indicates it's probably a sensor problem due to that launch vibration those are the fuel tank pressures for these altitude 202 nautical miles downrange velocity now reading 11 000 feet per second a status checking mission controlled by flight director neil hutchinson columbia houston your goal at 5 30 miko 8 plus 3 4. right now mark 5 minutes uh 40 seconds i'd call up from capcom brandon says columbia is projecting navigation and engine performance look good you're reading you loud and clear okay your career a little weak mark uh boy should 555 getting better here in a second six minutes columbia now 76 nautical miles altitude 280 nautical miles downrange velocity now reading 13 000 feet per second and you'll be able to hear their voices from bermuda before long from the tracking station there columbia houston i could have the cryo heaters please and columbia your single engine rotor martin singer

[00:54:01 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3241s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3241s)

colombia is capable of an emergency landing at rotor naval air station spain mark uh six minutes 40 seconds columbia pitching over now diving to increase velocity decrease altitude giving columbia her most favorable attitude colombia now 72 nautical miles in altitude 373 nautical miles downrange velocity now reading uh 16 400 feet per second that's right on the money isn't it joe right on the money and the uh the cutoff times single engine call up from capcom brandenstein so a perfect launch and a perfect mission so far so far so good absolutely thrilling to see that video single engine press for me okay now they can lose two engines and you still get the port says the young encryption can achieve orbital insertion even if two engines go out and in about one mark uh minutes i mean 30 seconds columbia 67 nautical miles in altitude four hundred and eighty-five as the fuel tanks get lighter and lighter mark seven minutes uh 45 seconds should be happening now columbia's [Music] and then just before cut off they'll throttle back to a 65 degrees now 63 nautical miles in altitude 606 nautical miles downrange mark 8 minutes 15 seconds columbia now 63 nautical miles in altitude 650 nautical miles downrange standing by now for main engine cutoff

[00:56:14 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3374s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3374s)

means that they can rates were low sep was on here we confirmed this and two minutes from cut off they will uh burn the orbital maneuvering engines confirm external tank separation columbia now performing an evasive maneuver now john is hello and as far as we're concerned here on earth it's upside down as at the moment their heads down of course they don't feel that i know that they're weightless now and they're not in orbit yet the external tank is going to re-enter in the indian ocean and break up uh and that's what the orbiter would do if they don't do that the series of two burns that are that are coming up but they've got three times 40 seconds go no go statistic control for the first time external tank will break up over the indian ocean and it has what they call a footprint that is a track that will go it'll be about 100 miles long and 60 miles wide they don't expect it to hit on land anywhere that they pretty well but it left on time i mean it broke away on time so that means it won't hit australia which was the main worry that's right that's right now they're going to have their first orbital burn they're going to turn on the orbital maneuver subsystem moving columbia forward and higher on her flight path placing colombia in orbit these are two little other engines that are in the back of the air of the uh columbia as well and we'll be back checking out all of this everything going extremely well for the columbia space shuttle on this historic first launch going very well indeed we'll have continuing coverage of it all right

[00:58:03 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3483s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3483s)

nbc's coverage of the first space shuttle will continue in a moment all going well with the columbia space shuttle which was launched here this morning just about 12 and a half minutes ago coming up in 13 minutes now when it lifted off it weighed four and a half million pounds and it's down to 200 000 pounds which is the best quick weight loss diet that i know of i'll tell you get rid of all that fuel in a hurry well it had about seven million pounds of thrust to take it off the spacecraft which is now shorn of its auxiliary fuel tanks uh is uh being listened to by this tracking station in madrid it's that far it went off something like 13 minutes ago and it's being picked up by madrid spain we would like to show you the launch again the videotapes that we've made here uh of the launch that did take place just at seven o'clock this morning precisely on time a textbook launch of the shuttle after a bad day earlier in the week and here it is now nine eight seven six five four we've gone for main engine start we have been injured from america's first space shuttle has cleared the tower never came close to the tower they were a little concerned about that and it's turning around i have never seen one of these in person and i can't tell you i don't want to disappoint you in any way the kind of electronic distance between the television and the thrill of being there to watch it go is considerable major patch legs flap i'm gonna say i mean that's what one of the guys said yesterday makes your pants lake fun it's all the fourth of july you've ever seen rolled into one and that's about as good a description as i know i'll never forget it at about this stage in the launch um astronaut krippen who was the first on his first trip into space said what

[01:00:01 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3601s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3601s)

on his first trip into space said what of you what a view and he's just starting to see the great views very powerful john you'll be constantly calling him back from the window to do the job they are now um well they're way out there now they're about eighteen hundred miles i suppose more than that um probably over two thousand miles downrange heading for the coast of um africa is a jail yes they go down over africa and out into the indian ocean they'll uh they'll be picked up by our indian ocean station at uh what is it 40 no it's before 44 minutes about 35 minutes so this is not where they are now uh if you're looking at your screen it's where they were when they launched went off a lot of very very happy people in launch control here uh it all after many years of delays and an awful lot of money it's working perfectly nasa as you might expect was very eager to have this happen because they figured that all the criticism of the space shuttle the space transport system will begin to diminish considerably once they get off in good shape as they have here today we have some other reaction now to the launch 64.7 feet per second duration of the burn one minute 27 seconds resulting orbit uh apogee 132 nautical miles perigee 57 nautical miles so colombia is now in orbit not yet her desirable orbit at the start of olms one columbia was about 400 feet below 150 feet in front and 350 feet north of the tank also columbia weighed four and a half million pounds at launch she now weighs about 214 000 pounds so they're hitting all the markers shuttle control houston they're if they're at 132 miles up now in apogee

[01:02:00 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3720s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3720s)

up now in apogee uh they were supposed to be 172 miles no no no no the first one was speaking nautical miles and uh your chart is in statute miles which accounts for the uh for the difference the first one was uh as i saw it listed was uh at 130 and 57 targeted for a 130 mile nautical mile circular orbit right right after the second burn and that is 170 statute yeah one thirty one thirty and there's that's right well then they are on the money yeah okay bob azell standing down in the press site and he's with a couple of people who have been here watching all this a couple of californians i think bob it's true and i must say uh i've been preparing for this thing for months and it's so overwhelming that i can't even put it into words and you think you can be cynical about things but the emotion of this that our miami bureau chief don vaughn was sitting next to me tears were coming down his eyes he and he's a pretty tough guy we have with me two guys steve spielberg the film filmmaker governor jerry brown of california what did you governor what did you think it was just great just watching that thing just take off it made me feel like we got a lot of strength in this country and and i hope we take some uh heart from that and start expanding our commitment to space it's real important for our spirit as well as our economy mr spielberg what did you think when you saw it well it sort of puts everything that we do in movies in in in quick diminishing perspective uh it was uh a remarkable experience it was a remarkable experience i think it was for everybody out here thank you very much and john everything going well the spaceship is on its way and we'll be back with more coverage after this the spacecraft is now heading for africa uh astronaut krippen told houston just a moment or two ago he said i'm sorry i could not see gibraltar i was too darn busy uh he may get another chance to see

[01:04:01 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3841s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3841s)

uh he may get another chance to see quite a lot just got to go from houston for ohms 2 which is the orbital maneuvering system that will put them into their final orbit that should be coming up in about 24 minutes or so if everything continues to go as well as it is and jim cummins has a report for us from here at the kennedy space center john at the moment the rockets fired there was a collective gas spot here among the crowd and exactly five minutes later loud applause once they knew the astronauts were safely on their way i'm standing here with gordon brown and his wife hilda mr brown has worked on the shuttle project over the years and has seen many launches how did this one compare to all the others you've seen oh this was fantastic in comparison to any of the others uh we were all waiting very expectantly and it just went beautifully we hope the rest of the mission goes as well as the launch how was it different from the from the others you've seen well uh it's you know it's just more anticipation you have a man launch situation here and uh and you you're you're very anxious that you know the astronauts are safe in there and everything goes well and and you have solid rockets it's an all new configuration that we're dealing with here and i thought it went real well how about you mrs brown you got a big smile i was so excited you know we have a beautiful spot here with i took us some pictures i hope my camera take it pretty well we had a beautiful spot indeed one nasa official said from this spot even though we're farther away from the launch site than other viewing spots we had the best profile of the launch and it was spectacular and all we're hearing around here are superlatives john well thank you all you're hearing from us in here is superlatives uh joke have you seen anything that isn't going the way it was supposed to go i expected three or four male functions during launch just as a uh as a matter of statistics yeah uh we didn't get any we had a couple of sensors in the uh in the ohms fuel tanks yeah that was it

[01:06:01 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3961s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=3961s)

in the ohms fuel tanks yeah that was it it's been totally normal well we could have been alone yeah i highly recommend it that's gripping isn't it yep that's krippen the new veteran right he's uh first base uh flight and his joker three minutes mission elapsed time columbia we're 20 seconds from los we'd like uh the flash evaporator uh heater feed line system bravo the two and we're 13 seconds from los configure leaving one area where they can be heard and heading for another the flash evaporator is very important because that's the cooling system that's working there now and that thing heats up if you think you have trouble with your claws all the systems going on they imagine what they're going through up there later on we'll be talking about if they're going to open up the cargo doors and they've got some of the next stations in there as well radiators the radiators throw all the heat out into space and that'll be the next big dramatic thing after they hit orbit with oms2 that will come in about an hour and 10 minutes or so and we will show you that on television because we expect to get live television pictures at that time we'll be back with more coverage after this we're back at the kennedy space center where we have witnessed an extremely successful launch of the columbia space shuttle orbiter this morning now heading for the indian ocean we'll be hearing from it again before too long and then later on this morning we'll be showing you television pictures from space as they open the big cargo doors it was an extraordinary liftoff here the first test flight of the columbia orbiter this time with two people on board astronauts john young and robert crippen here it is 10 9 8 7 six five four we've gone for main engine start we have main engines

[01:08:06 (https://www.youtube.com/watch?v=MPO2r5wIl6U&t=4086s)](https://www.youtube.com/watch?v=MPO2r5wIl6U&t=4086s)

off of america's first space shuttle and the shuttle has cleared the tower there's a whole lot of hardware to get up into the air and to get it up fast with that surge of power well the one thing about the shuttle is that it sort of jumps off the pad as opposed to the uh apollo launches that we saw that went up very slowly and sort of majestically and gracefully this thing popped right in the air the thrust to weight ratio is is is higher with seven million pounds of thrust and only four and a half million of weight it just leaps out this is a drag racer it can be great a quarter mile i'll tell you to have that one you could win all sorts of dollar bills now later this morning and let's talk about that for a moment in about an hour and five minutes uh they are going to open the the hatch on let's call it that the hatch on the back of the of the of columbia uh a very important maneuver because if that doesn't work they're going to have to come back uh but that's the cargo hold and they're going to open that up and it does a number of things we'll be back on the air for that we're about to go off now but we'll be back on the air for that in the eastern standard time at about 8 35 there will be television pictures of part of that from space and uh that is an important maneuver isn't it joe that's extremely important they have to abort if they didn't uh get those open if they don't open the doors they don't get the cooling and if there's anything wrong with the doors they won't open them okay we'll be back to show you and describe all that for you at about 8 35 eastern time this morning nbc news continues its coverage of the columbia space shuttle this special report has been produced by nbc news

---

END